Initial Study: Caldecott Improvement Project

On Route ALA/CC 24
From: ALA 24 KP 6.4 (PM 4.0)
To: CC 24 KP 3.7 (PM 2.3)
Caltrans Contract No. 04a1394

Lead Agency:

California Department of Transportation 111 Grand Avenue Oakland, CA 94612-3006 Contact: Leo Scott (510) 286-5546

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District 4

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Chapter 1

Introduction and Project Description

Introduction

The California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA), in cooperation with the Metropolitan Transportation Commission (MTC), the Alameda County Congestion Management Agency (ACCMA), and the Contra Costa Transportation Authority (CCTA), propose to construct a fourth bore of the Caldecott Tunnel between Alameda and Contra Costa Counties, California (the Caldecott Improvement Project). The project site extends from the State Route 24/Broadway interchange in Alameda County to the State Route 24/Camino Pablo interchange in Contra Costa County.

Background

The Broadway Tunnel was constructed in 1903 to serve travelers moving between Alameda and Contra Costa Counties. The tunnel was built to reduce the danger of accidents to travelers descending the steep grade from the summit of the Berkeley Hills. In 1915, the Broadway Tunnel was improved to accommodate autos and trucks, and in 1937, the Broadway Tunnel was replaced with the existing twin-bore Caldecott Tunnel. During the 1950s, the need to increase the capacity of the tunnel became apparent as the population of Contra Costa County increased by 37% in that decade alone. In 1964, the third bore was opened. The design for the third bore included a preliminary alignment for a future fourth bore to be located north of the third bore.

The growth in population and decentralization of employment centers in Contra Costa County and the Bay Area are resulting in a significant rise in traffic accidents and reverse commute congestion on Route 24 and surrounding areas, both on weekdays and weekends. In addition, the peak direction volumes and the reverse commute direction volumes are becoming more balanced. To maximize the capacity of the tunnels, the traffic direction in the center bore is reversed twice each weekday to provide four lanes in the peak commute direction and two lanes in the reverse commute direction. The reverse commute capacity reduction results in congestion and queuing upstream of the tunnel portals. During weekends, Caltrans has had to change the number of peak direction lanes up to five times daily to accommodate changing demands and reduce queuing.

Currently, the Caldecott Improvement Project is not listed in the MTC's Regional Transportation Plan (RTP). In July 2000, Governor Gray Davis signed Assembly Bill No. 2928, which appropriated funding for the state's Traffic Congestion Relief Plan (TCRP), a comprehensive investment in California's transportation system. This project is listed in the legislation as eligible project number 15, "Route 24; Caldecott Tunnel; add fourth bore tunnel with additional lanes in Alameda and Contra Costa Counties." The TCRP included \$20 million for this project.

Existing Conditions

Bores

The existing Caldecott Tunnel has three bores, with each bore having two mixed-flow lanes. The first bore serves the eastbound traffic, and the third bore serves the westbound traffic. The second bore uses a "pop-up" lane control system to serve commuters in the peak commute direction. Currently on weekdays, the second bore serves westbound traffic during the a.m. commute periods and eastbound traffic during the p.m. commute periods.

The first and second bores were constructed in 1937. Each bore is 1,103 meters (3,619 feet) long and 8.1 meters (26.7 feet) wide and includes two 3.4-meter (11-feet) traffic lanes. There are no shoulders within the bore sections. However, each bore has an emergency egress walkway that varies from 0.3 to 0.9 meters (1 to 3 feet) wide.

The third bore was constructed in 1964. It is 1,149 meters (3,771 feet) long and 10.5 meters (34.5 feet) wide and includes two 4.25-meter (14-feet) traffic lanes. There are no shoulders. However, the bore has an emergency egress walkway that varies from 0.75 to 1.2 meters (2.5 to 4 feet) wide.

Route 24

In the 1998 state legislative session, Assemblywoman Lynne Leach of Walnut Creek introduced a bill requesting that Caltrans perform a study of a new fourth bore for the Caldecott Tunnel. The bill, Assembly Bill 2010, died in the Legislature, but soon after, MTC received a number of letters urging that it undertake such a study. Following a brief evaluation, the Commission decided in September 1998 to initiate a broader study of the entire Route 24 corridor. The MTC Draft Final Summary Report for the Route 24/Caldecott Tunnel Corridor Study found that Route 24 is a major transportation corridor between Alameda and Contra Costa Counties. The study found that existing travel could be characterized as follows.

 Most of the corridor travel is regional, primarily between Oakland/Berkeley and Lamorinda (the Cities of Lafayette, Moraga, and Orinda)/Walnut Creek.

- The peak has been westbound in the morning and eastbound in the evening.
- Route 24 has a relatively large transit share, with 33% taking BART during the morning in the westbound direction and 14% in the eastbound direction.
- Carpools and vanpools comprise a small percentage of total traffic during peak commute periods (less than 10%).
- Eastbound traffic queues during the morning commute period extend 0.8 kilometer (0.5 mile) from the west portal.
- Westbound traffic queues upstream from the east portal extends past the Camino Pablo/Moraga Way interchange.

Project Location

The project area is located in the San Francisco Bay area in central California (Figure 1). The Caldecott Tunnel is part of the Route 24 corridor between Alameda and Contra Costa Counties (Figure 2). The Route 24 corridor extends from Interstate 980 (I-980)/Interstate 580 (I-580) in Oakland, Alameda County to Interstate 680 (I-680) in Walnut Creek, Contra Costa County. The project area extends from the Route 24/Broadway interchange in Alameda County to the Route 24/Camino Pablo interchange in Contra Costa County.

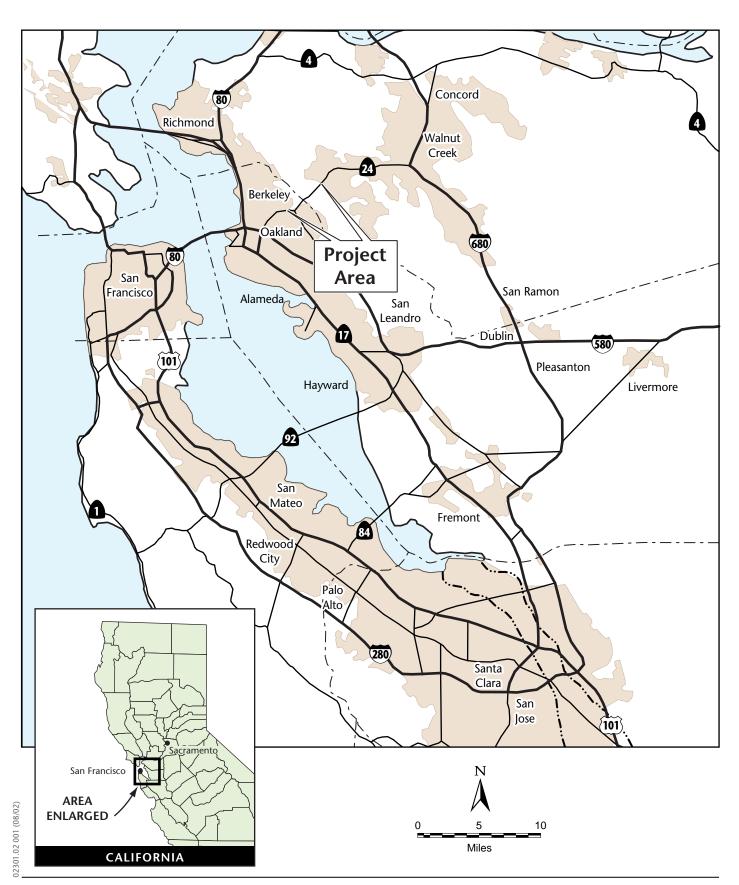
Project Description

The proposed project consists of constructing a fourth bore of the Caldecott Tunnel and potentially constructing a new bikeway tunnel or reconstructing an existing tunnel for a bike facility.

Project Alternatives

Alternatives for the proposed project, including multiple operational variants, may include, but are not limited to the following.

- 1. No Build
- 2. Transportation Systems Management
- 3. 2-lane roadway tunnel with standard shoulders
 - a. North side
 - b. South side
- 4. 3-lane roadway tunnel with standard shoulders
 - a. North side
 - b. South side





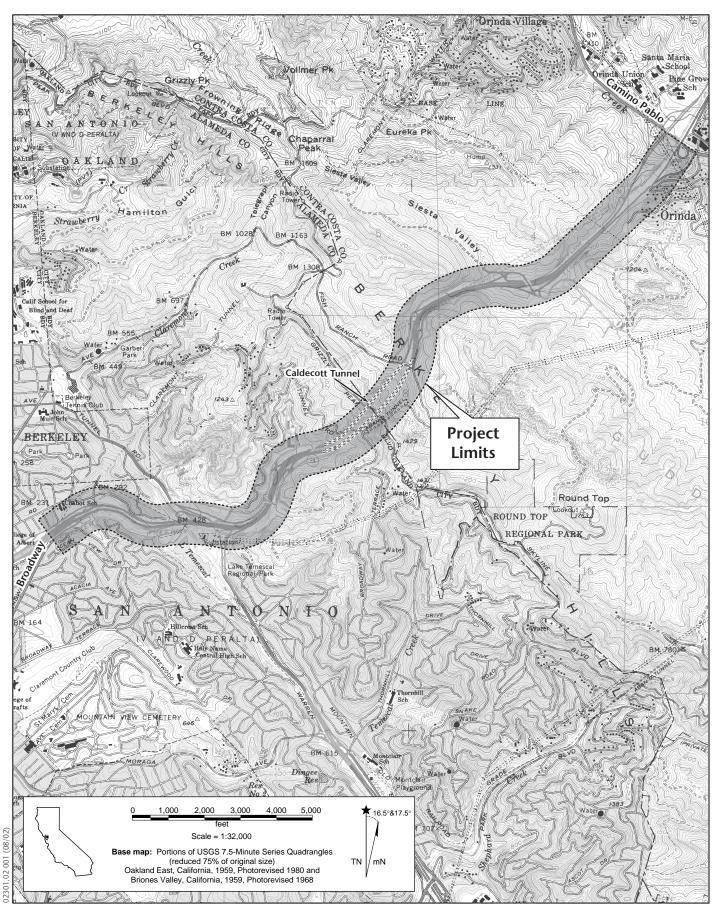




Figure 2 Project Limits

- 5. 4-lane roadway tunnel with standard shoulders
 - a. North side
 - b. South side
- 6. Bikeway tunnel
 - a. New bike tunnel
 - b. Reconstruct Kennedy tunnel
- 7. Mass transit

Depending on the roadway tunnel alternative selected, construction activities in addition to the tunnel construction would be necessary and could include

- construction of an auxiliary lane on westbound Route 24 from the Gateway off-ramp in Orinda to State Route 13 (SR-13) in Berkeley,
- reconstruction of the Caltrans access bridge to the Caldecott Tunnel on the west side of the tunnel,
- modifications to existing tunnels, and
- modifications to the Route 24/SR-13 interchange.

Purpose and Need

The Caldecott Improvement Project is intended to alleviate congestion along the Route 24 corridor near the Caldecott Tunnel. Additional passenger capacity is needed at the Caldecott Tunnel to handle weekday and weekend non-peak direction traffic on Route 24 between the Cities of Oakland and Berkeley in Alameda County, and the Cities of Orinda and Walnut Creek in Contra Costa County. Geometric improvements are also needed at the tunnel to improve the flow of traffic in the corridor and reduce the potential for congestion-related accidents at the non-peak direction queues that form at the tunnel approaches.

Environmental Checklist

1. Project Title: Caldecott Improvement Project

2. Lead Agency Name and Address: California Department of Transportation

111 Grand Avenue

Oakland, CA 94612-3006

3. Contact Person and Phone Number: Leo Scott, (510) 286-5546

4. Project Location: The proposed project is located on Route 24 from

> Broadway in Oakland, Alameda County, to Camino Pablo in Orinda, Contra Costa County. The Caldecott Tunnel is part of the State Route 24 corridor. The State Route 24 corridor extends from Interstate 980/Interstate 580 (I-980/I-580) in the City of Oakland. Alameda County to Interstate 680 (I-680) in the City of Walnut

Creek, Contra Costa County, (Figures 1 and 2).

5. Project Sponsor's Name and Address: California Department of Transportation

111 Grand Avenue

Oakland, CA 94612-3006

6. General Plan Designation: The City of Oakland General Plan, City of Berkeley

> General Plan, Contra Costa General Plan, and City of Orinda General Plan contain land use designations for the

project area.

Land use designations for the western part of the project

area are established by the Cities of Oakland and

Berkeley. The project area includes a mix of open space

and residential land use designations.

Land use designations for the eastern side of the project area in the vicinity of the east portal are established by the Contra Costa General Plan, and include several

designations for open space (agricultural lands, parks and recreation, watershed, and open space). The easternmost part of the project area is within the jurisdiction of the City of Orinda. The Orinda General Plan designates the

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area around the interchange with Gateway Boulevard for public open space.

7. Zoning:

Zoning for the project area is established by the Cities of Oakland and Berkeley in Alameda County and by Contra Costa County and the City of Orinda in Contra Costa County. Zoning in the unincorporated part of Contra Costa County includes several categories of open space zoning, including General Agriculture (A-2) in the area above the tunnel and Exclusive Agriculture District (A-80) in the area east of the tunnel portal. Zoning in the City of Orinda includes Public Space (PS) along the Route 24 corridor between Shakespeare Festival Way and Pablo Moraga Way, with the exception of the southwest quadrant of the Route 24/Pablo Moraga Way interchange, which is zoned for Low-Density Residential (RL-20 and RL-6). The area northeast of Pablo Moraga Way is generally zoned for Downtown Commercial (DC).

Zoning in the City of Oakland includes One-Family Residential and Low-Density Residential (R-30 and R-20) in the area over the existing tunnel and north of Route 24. The area adjacent to Route 24 to the south and the Grizzly Peak Open Space are zoned for Open Space (OS).

A small portion of the project area north of Route 24 between State Route 13 (SR 13) and Broadway is within the limits of the City of Berkeley. Zoning for the project area in the City of Berkeley is Single-Family Residential (R-1).

8. Description of Project:

The proposed project consists of constructing a fourth bore of the Caldecott Tunnel and potentially constructing a new bikeway tunnel or reconstructing an existing tunnel for a bike facility. Alternatives for the proposed project, including multiple operational variants, may include, but are not limited to the following.

- 1. No build
- 2. Transportation Systems Management (TSM)
- 3. 2-lane roadway tunnel with standard shoulders
 - a. North side
 - b. South side
- 4. 3-lane roadway tunnel with standard shoulders
 - c. North side
 - d South side

- 5. 4-lane roadway tunnel with standard shoulders
 - a. North side
 - b. South side
- 6. Bikeway tunnel
 - a. New bike tunnel
 - b. Reconstruct Kennedy tunnel
- 7. Mass transit

For the roadway tunnel alternatives, construction activities in addition to the tunnel construction would be necessary and could include

- construction of an auxiliary lane on westbound Route 24 from the Gateway off-ramp in Orinda to SR-13 in Berkeley,
- reconstruction of the Caltrans access bridge to the Caldecott Tunnel on the west side of the tunnel.
- modifications to existing tunnels, and
- modifications to the Route 24/SR-13 interchange.

9. Surrounding Land Uses and Setting:

Land uses in the project area are primarily residential and open space. In Alameda County, where land uses include public/open space and residential, the project area is within the planning area of the Cities of Oakland and Berkeley. Residential uses surrounding the western portal are located primarily along Skyline Boulevard and Grizzly Peak Boulevard in the hills above the tunnel, and in the area north of Route 24 and include single- and multi-family residences. Much of the project area lies in open space areas that include the Grizzly Peak Open Space, North Oakland Regional Sports Center, and Lake Temescal Regional Recreation Area. In Contra Costa County, wherein lies the eastern portal, the project area is nearly all open space, and is in the Sibley Volcanic Regional Preserve and the East Bay Regional Park District (EBRPD) watershed. The open space area above the tunnel has been identified as a potential habitat link across Route 24 for wildlife traveling between open tracts of land north and south of the freeway corridor. Some residential uses are located near the eastern end of the project area in the City of Orinda.

10. Other Public Agencies whose Approval Is Required:

The following discretionary actions may be required by the federal lead agency for project implementation.

- Federal Highway Administration (FHWA)—approval of the project
- FHWA—certification of compliance with federal requirements
- FHWA—certification of the EIS
- FHWA—approval of federal funding
- FHWA—Section 4(f) evaluation

Other agency approvals may include the following.

- San Francisco Bay Regional Water Quality Control Board—Section 401 water quality certification
- East Bay Regional Park District—Encroachment permit
- U. S. Army Corps of Engineers—Section 404 permit
- California Department of Fish and Game—Streambed Alteration Agreement
- U.S. Fish and Wildlife Service—Biological Opinion
- State Office of Historic Preservation—Section 106 concurrence

Environmental Factors Potentially Affected:

The environmental factors checked below would potentially be affected by this project (i.e., the project would involve at least one impact that is a "Potentially Significant Impact"), as indicated by the checklist on the following pages. Mitigation has been identified to reduce all impacts to a less-than-significant level.

X	Aesthetics		Agricultural Resources	X	Air Quality		
X	Biological Resources	X	Cultural Resources	X	Geology/Soils		
X	Hazards and Hazardous Materials	X	Hydrology/Water Quality	X	Land Use/Planning		
	Mineral Resources	X	Noise	X	Population/Housing		
X	Public Services	X	Recreation	X	Transportation/Traffic		
X	Utilities/Service Systems	X	Mandatory Findings of Significance	;			
Det	ermination:						
On	the basis of this initial evaluation:						
	I find that the proposed project CO NEGATIVE DECLARATION wi		D NOT have a significant effect on to prepared.	he e	nvironment, and a		
	not be a significant effect in this c	ase l	ect could have a significant effect on because the project proponent has ag initial study. A MITIGATED NEGA	reed	to implement all the		
X	I find that the proposed project M ENVIRONMENTAL IMPACT R		have a significant effect on the environment of the	onm	ent, and an		
	significant" or "potentially significant analyzed in an earlier document p mitigation measures based on the	cant ursu earli	have an impact on the environment the unless mitigated" but at least one effect and to applicable legal standards and the analysis, as described on attached DRT is required, but it must analyze of	fect ((2) l shee	(1) has been adequately has been addressed by ets. An		
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects a have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and b have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the project, nothing further is required.						
Sig	nature		Date				
	n Webb						
Pri	nted Name						

		Potentially significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No impact
I.	AESTHETICS. Would the project:				
a.	Have a substantial adverse effect on a scenic vista?				
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?				
c.	Substantially degrade the existing visual character or quality of the site and its surroundings?	•			
d.	Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?				

- a.—c. Route 24 is an officially designated state scenic highway from the east portal of the Caldecott Tunnel to I-680 near Walnut Creek. The existing 1937 tunnels (first and second bores) are listed on both the National Register of Historic Places and California Register of Historic Places. Construction of the proposed project would result in excavation and grading activities as well as construction staging areas in the viewshed of the Berkeley Hills above the Caldecott Tunnel. The proposed project would result in changes to the scenery in the project area, which could include trees, rock outcroppings, and historic structures along the Route 24 corridor. These impacts are considered **potentially significant** and will be analyzed in the EIR/EIS.
- d. The proposed project would require the addition of lighting at both portals of a new roadway tunnel, as well as lighting within the tunnel itself. The existing tunnels and portals are already illuminated. The addition of a new source of light could have an adverse effect on nighttime views in the area. This impact is considered **potentially significant** and will be analyzed in the EIR/EIS.

		Potentially significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No impact
II.	AGRICULTURAL RESOURCES. In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation. Would the project:				
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	٥		•	
b.	Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?			•	
c.	Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use?			•	

a.-c. There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance in the project area; therefore, the project would not convert or result in the conversion of any of these lands to non-agricultural uses. Some of the agricultural/open space land surrounding the project site is used for grazing, but these areas would be avoided during construction. Therefore, impacts to agriculture resources are expected to be **less than significant**.

		Potentially significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No impact
III.	AIR QUALITY. When available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a.	Conflict with or obstruct implementation of the applicable air quality plan?	•			
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	•			
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	•			
d.	Expose sensitive receptors to substantial pollutant concentrations?	•			
e.	Create objectionable odors affecting a substantial number of people?				•

- a.-d. **Potentially significant** project-related air quality impacts may occur as a result of changes in traffic volumes or patterns and construction-generated emissions. In addition, construction vehicle traffic and dust generated during construction of this project might be a source of increased air pollutants. Air quality impacts will be analyzed in the EIR/EIS.
- e. The project is not expected to create objectionable odors. There would be **no impact.**

		Potentially significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No impact
IV.	BIOLOGICAL RESOURCES. Would the project:				
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	•			
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	•			
c.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?	•			
d.	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	•			
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	•			
f.	Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?				•
g.	Result in the introduction or spread of noxious weeds?			•	

a.-d. The presence and/or potential habitat of several federally and state-listed endangered species have been recorded in the vicinity of the Caldecott Tunnel, including the Alameda whipsnake, pallid manzanita, and California red-legged frog. The proposed project is not expected to affect riparian habitat. A small wetland is present on the Contra Costa side of the proposed fourth bore alignment and would be unavoidable during construction of the portal and highway lanes for the

- north roadway tunnel alternatives. The ridgeline above the Caldecott Tunnel is an important wildlife corridor for large carnivores and other wildlife passing between open space areas north and south of the Route 24 corridor. **Potentially significant** project-related impacts may occur during the construction and staging of the project. These issues will be analyzed in the EIR/EIS.
- e. The Contra Costa General Plan and the City of Oakland General Plan contain policies that support the conservation of open space, wildlands, and agricultural lands. A significant portion of the project area is either open space or agricultural land. There is a potential for the proposed project to conflict with local plans and policies related to conservation. This impact is considered **potentially significant**. This issue will be analyzed in the EIR/EIS.
- f. There are no adopted Habitat Conservation Plans or Natural Community Conservation Plans within the proposed project area; therefore the project is not anticipated to conflict with adopted Habitat Conservation Plans or Natural Community Conservation Plans. There would be **no impact**.
- g. The proposed project is not anticipated to result in the introduction or spread of noxious weeds. An executive order (EO) on invasive species (February 3, 1999) directs weed control. As part of the environmental analyses, the Alameda County and Contra Costa County agricultural commissioners would be contacted to discuss noxious weed infestation and dispersal on private and public rights-of-way. This impact is considered **less than significant**.

		Potentially significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No impact
V.	CULTURAL RESOURCES. Would the project:				
a.	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	•			
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	•			
c.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	•			
d.	Disturb any human remains, including those interred outside of formal cemeteries?	•			

a.—d. A records search of the Caldecott Tunnel area was conducted for the project in October 2001. The results of that search indicated that several cultural resources are associated with the existing tunnels, including the original Broadway Low-level Tunnel, the Portal Buildings, and the east and west portal approaches, all of which have been placed on the National Register of Historic Places. In addition, Fish Ranch is recorded in the Contra Costa Historic Resources Inventory as a "site of historic event." The proposed project may potentially impact archeological or historical resources during excavation or construction activities. These impacts are considered **potentially significant**. Cultural resources will be analyzed in the EIR/EIS.

		Potentially significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No impact
VI.	GEOLOGY AND SOILS. Would the project:				
a.	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	•			
	2. Strong seismic ground shaking?				
	3. Seismic-related ground failure, including liquefaction?	•			
	4. Landslides?				
b.	Result in substantial soil erosion or the loss of topsoil?			•	
c.	Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	٥			•
d.	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?				•

a.1.—4. The western limit of the Caldecott Tunnel is located about 30 kilometers (18.6 miles) from the San Andreas fault (Maximum Credible Earthquake [MCE] of Magnitude 8.0) and approximately 1 kilometer (0.6 mile) from the Hayward fault (MCE of Magnitude 7.5). These two faults, due to their high activity and relatively proximity to the project site, are the dominant seismic sources that affect the Caldecott Tunnel. Since the Hayward fault does not cross the Caldecott Tunnel, the potential for rupture through the tunnel as a result of primary shearing appears to be low. However, due to the close proximity of the fault, secondary faulting may occur. Therefore, this impact is considered **potentially significant** and will be analyzed in the EIR/EIS.

- b. The project potentially involves a tunnel and some modifications to roadways on both sides of the tunnel. The project would only have minor effects on topsoil, and risk of erosion would be associated with construction activities. The project proponent would incorporate best management practices to minimize loss of topsoil. This impact is considered **less than significant**.
- c.-e. The project would not be located on unstable or expansive soils, and would not require the use of septic tanks or alternative wastewater disposal systems. There would be **no impact**.

		Potentially significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No impact
VII.	HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			•	
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			•	
c.	Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				•
d.	Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	•			
e.	Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area?	٥			•
f.	Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area?				•
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	•			
h.	Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	•			

a.-b. Operation of the proposed project would not result in any increase in the routine transport, use, or disposal of hazardous materials. Hazardous materials transportation controls are in place for the existing Caldecott Tunnels. However, hazardous materials would be used and could spill during construction and under postconstruction conditions. In the event of a spill, notification and

- cleanup operations would adhere to the City of Oakland or Contra Costa County emergency response plans to mitigate hazards to people and the environment. Consequently, this impact is considered **less than significant**.
- c. The proposed project is not located within 0.40 kilometer (0.25 mile) of an existing or proposed school. There would be **no impact**.
- d. There are no known hazardous materials sites in the project area. Potential hazardous waste contamination in the vicinity of the project includes aerially deposited lead; the presence of gasses in the rock formations crossed by the proposed tunnel alignment; and the potential presence of serpentine rock formations (asbestos), natural asphalt, and heavy oils in the excavated materials. This impact is considered **potentially significant** and will be analyzed in the EIR/EIS.
- e.-f. The project is not located in an airport plan area or within 3.2 kilometers (2 miles) of an airport, and is not in the vicinity of a private airstrip. There would be **no impact**.
- g. Construction traffic, lane closures, or unforeseen delays could impede emergency response vehicles during construction of the proposed project. This impact is **potentially significant** and will be analyzed in the EIR/EIS.
- h. The proposed project is located in an area with a high risk of wildland fires. Construction activities, widened roadways, and potential increases in traffic volumes would potentially increase the risk of wildland fires. This impact is considered **potentially significant** and will be analyzed in the EIR/EIS.

		Potentially significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No impact
VIII.	HYDROLOGY AND WATER QUALITY. Would the project:	·	·	·	·
a.	Violate any water quality standards or waste discharge requirements?	•			
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	•			
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite?	•			
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite?	•			
e.	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	•			
f.	Otherwise substantially degrade water quality?				
g.	Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				•
h.	Place within a 100-year flood hazard area structures that would impede or redirect floodflows?				•
i.	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?				•

		Potentially significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No impact
j.	Contribute to inundation by seiche, tsunami, or mudflow?				•

- a. The proposed project may potentially violate discharge standards during construction of new roads or facilities. This impact is considered **potentially significant** and will be analyzed in the EIR/EIS.
- b. The proposed project may potentially affect the distribution or percolation of groundwater resources during construction activities. This impact is considered **potentially significant** and will be analyzed in the EIR/EIS.
- c.-f. Construction of the proposed project may alter the drainage and/or flow patterns of water resources in the project area. Construction activities such as grading and paving may affect existing runoff and drainage patterns, including volume of runoff. This impact is considered **potentially significant** and will be analyzed in the EIR/EIS.
- g.-j. The project would not result in the construction of housing, and therefore would not place housing within a 100-year flood hazard area. Furthermore, the project is not likely to result in impacts associated with flood safety risk or inundation by seiche, tsunami, or mudflow. There would be **no impact**.

		Potentially significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No impact
IX.	LAND USE AND PLANNING. Would the project:				
a.	Physically divide an established community?				
b.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	•			

- a. The proposed project would increase the vehicular capacity of the tunnel but would not contribute to the physical division of an established community. There would be **no impact**.
- b. The land uses surrounding the proposed west portal include residential, open space, and park and urban open space. Land uses surrounding the east portal include open space, watershed, agriculture, and park and recreation. There is a potential for the project to conflict with land use policies or regulations (e.g., by converting an area of EBRPD open space to a roadway/tunnel right-of-way). This impact is considered **potentially significant**. Land use impacts will be analyzed in the EIR/EIS.

		Potentially significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No impact
Χ.	MINERAL RESOURCES. Would the project:				
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				•
b.	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				•

a.-b. There are no known significant mineral resources or mineral resource recovery sites in the project area. There would be **no impact**.

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		Potentially significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No impact
XI.	NOISE. Would the project:				
a.	Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	•			
b.	Expose persons to or generate excessive groundborne vibration or groundborne noise levels?	•			
c.	Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	•			
d.	Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	•			
e.	Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?				•
f.	Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?				•
a –d	Construction and implementation of the proposed pr	oiect would	result in both	short- and lo	ng-

- a.-d. Construction and implementation of the proposed project would result in both short- and long-term increases in noise levels within the project area. Construction activities and equipment could cause temporary increases in periodic noise levels. Implementation of the project would add lanes to the roadway tunnel, which would increase the capacity of the tunnel and potentially increase periodic noise and ambient noise levels in the vicinity of the proposed project area. These impacts are **potentially significant**. Noise impacts will be evaluated in the EIR/EIS.
- e.-f. The proposed project is not located near an airstrip; therefore there is **no impact**.

		Potentially significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No impact
XII.	POPULATION AND HOUSING. Would the project:				
a.	Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	•			
b.	Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?				
c.	Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?				•

- a. The proposed project would reduce congestion on the Route 24 corridor between Alameda and Contra Costa Counties. This change in traffic patterns could indirectly induce population growth. This impact is considered **potentially significant** and will be analyzed in the EIR/EIS.
- b.-c. The proposed project is not expected to displace any existing housing units or people. There would be **no impact.**

		Potentially significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No impact
XIII.	PUBLIC SERVICES. Would the project:				
a.	Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
	Fire protection?				
	Police protection?				
	Schools?				
	Parks?				
	Other public facilities?	•			

a. The project would result in potentially significant short- and long-term impacts on public services. Changes in traffic patterns occurring during construction may affect service ratios, response times, and other performance objectives of fire and police departments. The proposed project may have the potential to induce growth and may result in additional need for schools, and fire and police services. EBRPD's Sibley Regional Preserve is located adjacent to the proposed project site and would likely be affected by the proposed project. These impacts are considered **potentially significant** and will be evaluated in the EIR/EIS.

		Potentially significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No impact
XIV.	RECREATION. Would the project:				
a.	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	•			
b.	Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	•			

a.-b. The proposed project would have the potential to disrupt existing areas that are used for recreation, such as Sibley Regional Preserve and North Oakland Regional Sports Center, during construction activities. This impact is considered **potentially significant** and will be evaluated in the EIR/EIS.

		Potentially significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No impact
XV.	TRANSPORTATION/TRAFFIC. Would the project:				
a.	Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?				
b.	Cause, either individually or cumulatively, exceedance of a level-of-service standard established by the county congestion management agency for designated roads or highways?	•			
c.	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				•
d.	Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				•
e.	Result in inadequate emergency access?				
f.	Result in inadequate parking capacity?				
g.	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?			•	

- a.-b. Construction and implementation of the proposed project would result in potentially significant impacts. Alterations to traffic patterns caused during construction may cause delays and reduce level of service. Implementation of the project would increase the number of vehicle trips. These impacts are considered **potentially significant**. This topic will be studied in detail in the EIR/EIS.
- c.-d. The proposed project would not result in impacts to air traffic patterns. The proposed project is not expected to result in an increase in road hazards or incompatible uses. There would be **no impact**.
- e. During construction of the proposed project, temporary road or lane closures might be required, which would result in significant impacts to emergency vehicles access. This impact is considered **less than significant with mitigation incorporated** because Caltrans would

coordinate with emergency service providers to develop a construction-period traffic management plan.

- f. The proposed project would not result in a need for additional parking. There would be **no impact**.
- g. The proposed project would not conflict with adopted policies supporting alternative transportation. One alternative, if adopted, would provide a bicycle tunnel that would encourage alternative modes of transportation. This impact is considered **less than significant**.

		Potentially significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No impact
XVI.	UTILITIES AND SERVICE SYSTEMS. Would the project:				
a.	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				•
b.	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				•
c.	Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	•			
d.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?				
e.	Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				
f.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	•			
g.	Comply with federal, state, and local statutes and regulations related to solid waste?				•

- a.-b. The proposed project would not involve the discharge of wastewater. There would be **no impact**.
- c. The proposed project would result in an increase in impermeable surfaces and would create a new system of drainage for the overlying terrain. This impact is considered **potentially significant** and will be analyzed in the EIR/EIS.
- d. Operation of the proposed project would not require use of water; therefore, it would not require expanded entitlements. There would be **no impact**.
- e. The proposed project would involve improvements to existing roadways and would not result in an increased amount of wastewater discharge. There would be **no impact**.

- f. A considerable amount of solid waste would be generated by construction of the proposed project. No additional solid waste would be generated once construction has been completed. This impact is considered **potentially significant** and will be analyzed in the EIR/EIS.
- g. Solid waste present onsite during construction would be stored and disposed of according to all relevant federal, state, and local statutes. There would be **no impact**.

		Potentially significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No impact
XVII.	MANDATORY FINDINGS OF SIGNIFICANCE				
a.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?				
b.	Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	•			
c.	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	•			

a.-c. As described throughout this initial study, the proposed project has the potential to create significant impacts on the environment in several areas. All areas identified as having potentially significant impacts will be analyzed in detail in the EIR/EIS. Where feasible, mitigation measures will be proposed to reduce impacts to a less-than-significant level. However, until detailed analysis is completed, these impacts are considered **potentially significant** and will be analyzed in the EIR/EIS.

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